Utah Cancer Control Program
A Joint Program of the Utah Department of Health and Utah's Local Health Departments
Utah Department of Health

Breast Cancer Screening Outcomes

October 1,1994 - September 30, 1999

The Utah Cancer Control Program (UCCP) is a state and federally funded screening program that provides free breast and cervical cancer screening to Utah women. The program serves women who are older, members of minority populations, live in rural areas of the state, have lower incomes, and are uninsured or under-insured. The UCCP is a cooperative effort by the Utah Department of Health, Utah's local health departments, several community health centers, the Indian Health Service, and the U.S. Centers for Disease Control and Prevention (CDC).

Certified screeners perform Pap tests, pelvic exams, and clinical breast exams. Vouchers are distributed to women who meet age and income guidelines and may be exchanged for a free mammogram at participating facilities. Eligible women with abnormal screening exams are referred to providers for further diagnostic evaluation. UCCP staff work to ensure that women enrolled in the program with a diagnosis of cancer can access resources to obtain treatment. As a result of the 2001 Breast and Cervical Cancer Treatment Act, eligible women with a diagnosis of breast cancer, cervical cancer, or precancerous cervical lesions may now receive treatment through Utah Medicaid.

Nationally, similar federally funded screening programs are found in all 50 states, the District of Columbia, six U.S. territories, and among 12 American Indian/Alaskan Native organizations.[1] Utah's program began on October 1, 1994. The state received additional funding in 1999 for another five year period. This report highlights breast cancer screening outcomes for the first five years of this project and compares characteristics of women with and without a diagnosis of breast cancer.

Methods

In order to assure that adequate and appropriate data were collected to meet surveillance, tracking and reporting requirements, the CDC developed a set of minimum data elements that must be collected by each organization receiving federal funds. Required information includes demographics, results of screening exams and diagnostic evaluations, stage of cancer at time of diagnosis, and treatment information (if applicable).

The UCCP developed four data collection forms in order to collect the information required by the CDC as well as information needed by the program. Data collection forms and reports containing results are sent to the state office where they are checked for completeness and accuracy.

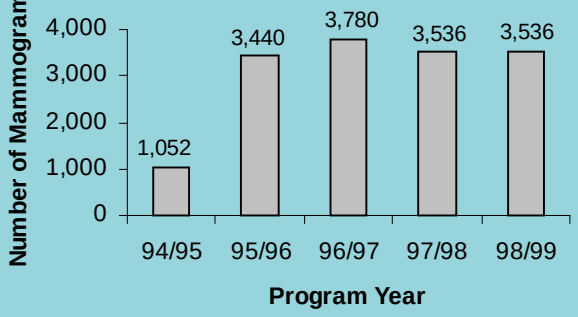
Data entry is performed at an outside facility. The data are then returned to the UCCP, edited and merged with existing program data. Personal identifiers are removed and cumulative data submitted to the CDC in electronic format twice a year. Nonidentifiable data are routinely analyzed and disseminated to partners. Data collected during the years 1994 through 1999 are summarized in this report.

Results

Number of Mammograms and Clinical Breast Exams Provided

The UCCP provided more than 15,000 initial mammograms (screening or diagnostic) to women from 1994 to 1999. These data represent the number of mammograms provided, not the number of women who received a mammogram since some women could have received more than one mammogram during this time period. As shown in Figure 1 (see page 2), the number of mammograms provided to CDC eligible women has increased substantially over time. Slightly over 1,000 mammograms were provided in the first year and an average of about 3,500 mammograms were provided in

Figure 1. Number of Initial* Mammograms Provided to CDC Eligible Women: October 1, 1994 - September 30, 1999 (N=15,344)



*The initial mammogram could be for screening or diagnostic purposes
Source: UCCP Program Data

subsequent years. More than 21,000 clinical breast exams were also provided during this five year period.

Demographics of Women Screened

The percent distribution of initial mammograms provided to CDC eligible women was determined for four age groups (Figure 2). Less than two percent of the total mammograms were provided to women under the age of 40 years. Almost 19% of the mammograms were provided to women 40 to 49 years of age. The majority of mammograms were provided to women aged 50 or older (approximately 80%).

In 1997, the midpoint year for this time period, 90.2% of Utah women aged 40-64 described their race as Caucasian, 0.6% as African American, 2.3% as Asian/ Pacific Islander, 1.1% as American Indian/Alaskan Native, and 6.3% reported being of Hispanic ethnicity.[2] Among women who received initial mammograms during the first five years of the program, 81.2% described their race as Caucasian, 1.3% as African American, 0.4% as Asian/Pacific Islander, 0.3% as American Indian/Alaskan Native, and 14.5% reported being of Hispanic ethnicity. Approximately 3.0% reported other/unknown race. The distribution of clinical breast exams by age group and race/ethnicity was similar to that seen for mammograms.

Overall, about one third of the women who underwent screening with a clinical breast exam (with or without a subsequent mammogram) were residents of rural/frontier counties in Utah.

Outcomes of Screening

There were 21,835 CDC funded screening cycles which included a clinical breast exam, mammogram or ultrasound. A total of 401 biopsies were performed and 96 breast cancers were detected.

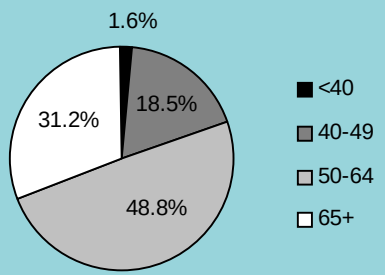
There were 21,818 clinical breast exams provided. Of these, 1,301 were abnormal. Further diagnostic evaluation resulted in the detection of 43 cancers. Therefore the percentage of all clinical breast exams with abnormal findings that resulted in a diagnosis of cancer was 3.2%. (Note: 35 of the women with abnormal clinical breast exams also had abnormal mammograms so their cancers would likely also have been detected by mammography.)

In addition, 15,344 initial mammograms were provided. Of these, 14,189 were assumed to be screening mammograms as the woman's clinical breast exam was normal. Of the screening mammograms performed, 1,303 were abnormal. Further diagnostic evaluation resulted in the detection of 53 cancers. The percentage of all screening mammograms with abnormal findings that resulted in a diagnosis of cancer was 4.1%.

The majority of breast cancers were found among women 50 years of age or older (82%). Nineteen cases were in situ and 77 cases were invasive breast cancers. Of the 77 cases of invasive cancer, 27.3% were staged as American Joint Commission on Cancer (AJCC) Stage I, 32.5% as AJCC Stage II, 10.4% as AJCC Stage III, and 1.3% as AJCC Stage IV. Additionally, 16.9% were staged as "Summary Local, 9.1% as "Summary Regional", and 2.6% as "Summary Distant" (see Figure 3, page 3).

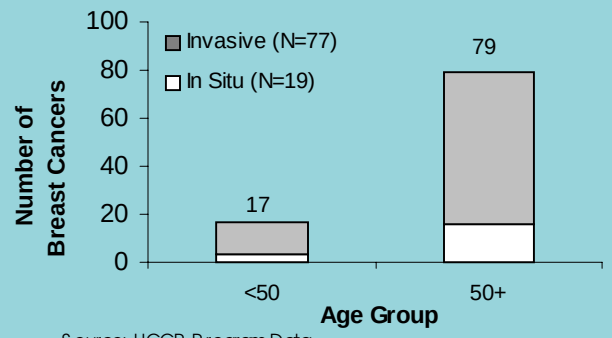
Smoking was slightly more common among women

Figure 2. Percent Distribution of Initial* Mammograms Provided to CDC Eligible Women by Age Group: October 1, 1994 - September 30, 1999



*The initial mammogram could be used for screening or diagnostic purposes
Source: UCCP Program Data

Figure 3. Number of Breast Cancers Detected Among CDC Eligible Women by Age Group: October 1, 1994 - September 30, 1999



Source: UCCP Program Data

diagnosed with breast cancer compared to women without breast cancer (9.4% compared to 8.3%). A slightly higher percentage of women with breast cancer were overweight or obese compared to women who were not diagnosed with breast cancer (59.4% compared to 56.2%). A family history of breast cancer was somewhat more common among women diagnosed with breast cancer than among those who were not (31.3% versus 26.3%).

Approximately 32% of women with breast cancer reported that breast symptoms prompted them to go to a screening clinic compared to 7.1% of women who were not diagnosed with breast cancer. Women with breast cancer were more likely to report that the most important reason they came to a clinic was the free mammogram voucher (12.5% compared to 8.5%). Furthermore, 23.9% of women with breast cancer reported that they had never had a mammogram before coming to a UCCP clinic compared to 12.5% of women without cancer.

Discussion

Breast cancer is the most commonly diagnosed female cancer in the U.S. and Utah and is the leading cause of cancer death among Utah women. In 1999, there were 984 new cases of breast cancer in Utah women and 183 deaths from this disease.[3,4]

The most important risk factor for breast cancer is advancing age. Other risk factors include having a previous diagnosis or a family history of breast cancer, certain breast changes such as a diagnosis of atypical hyperplasia or lobular carcinoma in situ, genetic alterations, early age at onset of menstruation, late age at menopause, use of hormone replacement therapy for long periods of time, never having children or having a first live birth after 30 years of age, increased breast density, history of chest radiation therapy, consumption of alcohol, and post-menopausal obesity.[5,6]

Not surprisingly, the majority of breast cancers detected in the UCCP population occurred in women 50 years of age or older. Most of the women who were diagnosed with breast cancer did not have a family history of the disease. In addition, women who were diagnosed with breast cancer were more likely to have abnormal results on their clinical breast exams and mammograms.

Since many of the known risk factors for breast cancer cannot be modified by preventive behaviors, early detection with mammography is key to preventing deaths from this disease. Clinical trials have demonstrated that routine screening with mammography can reduce breast cancer deaths.[7]

Use of mammography is increasing both nationally and locally. According to the 1987 Behavioral Risk Factor Surveillance System, 41% of Utah women aged 40 to 49 and 50% of Utah women aged 50 or older reported ever having had a mammogram before. These percentages increased to 81% and 89% respectively when Utah women were surveyed in 1999.[8]

About 86% of the women screened with federal funds through the UCCP during the first five years of the program reported having had a prior mammogram. While the majority of mammograms were provided to women who reported Caucasian race, the proportion of women screened who reported African American race or Hispanic ethnicity was well above the representation of these populations statewide.

The five year survival rate for localized breast cancer has increased from 72% in the 1940s to 96% today.[9] Late stage diagnosis is the primary predictor of poor survival from breast cancer. Of the 77 cases of invasive breast cancer detected among women screened by the UCCP, less than four percent of cases were detected after distant spread had occurred.

Note: This report presents the outcomes for women who received federally funded breast cancer screening services. The UCCP also provides low cost services to women who do not qualify for federally funded services. Please contact the UCCP at 1-800-717-1811 for further information.

www.utahcancer.org

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